## REMARKS

In the Office Action mailed March 17, 2005, the Specification was objected to for including various informalities as set forth in Section 1 on page 2 of the Office Action. In the present Amendment, Applicants have amended the Specification so as to address all of the minor informalities. Additionally, the Specification was objected to in Section 3 on pages 2 and 3 of the Office Action for failing to provide proper antecedent basis for subject matter claimed in claims 6 and 19 as per 37 CFR § 1.75 (d) (1) and MPEP § 608.01 (o). In the present Amendment, Applicants have amended page 14 of the Specification so as to include the subject matter set forth in claims 6 and 19 so as to ensure the Specification provides proper antecedent basis for the claimed subject matter. As such, Applicants respectfully submit that the Specification does not suffer from any deficiencies and respectfully request the objections to the Specification be removed.

Also in the Office Action mailed March 17, 2005, claims 2, 3, 7, 15-17, 24 and 30-34 were objected to under 37 CFR § 1.75 (a) for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the claims were objected to for various informalities as set forth in Section 2 on page 2 of the Office Action. Applicants have amended the claims in the manner suggested in the Office Action and respectfully request the objections to claims 2, 3, 7, 15-17, 24 and 30-34 be removed.

Also in the Office Action, claims 31, 32 and 34 were rejected under 35 U.S.C. § 102(a) as being anticipated by Watkins (U.S. 2003/0117275).

Claims 31-34 were rejected under 35 U.S.C. § 102(e) as being anticipated by Breed, et al. (U.S. Patent No. 6,748,797).

Claims 25 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Albuquerque (U.S. 2004/0196147).

The Office Action of March 17, 2005 indicated that claims 1-24 and 27-30 were allowed, or would be allowable if rewritten or amended to overcome the rejections under 37 CFR § 1.75(a) and 37 CFR § 1.75(d) (1). Presently, Applicants have amended claims 2, 7, 15, 24 and 30 so as to correct for the minor informalities noted in the Office Action, and Applicants respectfully submit that claims 1-24 and 27-30 are all in condition for allowance.

Applicants respectfully submit that claim 31 defines over both Watkins and Breed. Specifically, the references fail to disclose an apparatus for monitoring the condition of a tire that includes at least two sensors that are configured for measuring the temperature difference between different locations on one tire and for measuring the temperature difference between different locations of the other tire. Support for this claim amendment may be found in at least page 8, line 24 to page 9, line 2 of the Specification, in at least page 11, lines 10-16 of the Specification, and in at least page 12, line 24 to page 13, line 14 of the Specification.

Watkins discloses an apparatus for detecting potential tire failure that includes a receiver 42 for sensing a thermal field 58 that permeates the area defined by the wheel well 16 of a vehicle 11. Road contact of the tires 18 generate heat within the tires 18 and on the surface of the tires 18 so as to create the thermal field 58 on or near the outer surface of the tire 18 (see Watkins at paragraph 22). A signal is generated and sent to a processor 46 that compares the signal representative of the detected thermal characteristic with the characteristic of historically received signals stored in the memory of the processor 46. A comparison is made between he relative similarity or difference between the characteristic of the most recently received signal and the historical data stored by the processor 46 (see Watkins at paragraphs 34 and 36).

Watkins does not disclose the apparatus called for in claim 31 of Applicants' Application that includes sensors configured for measuring the temperature difference between different locations on one tire and for measuring the temperature difference between different locations on the other tire. Watkins, instead, discloses an apparatus that measures the thermal field generated by a tire and then compares this thermal field to previously stored data so as to obtain an indication as to whether tire failure is occurring. Nowhere does Watkins disclose sensors that are configured for measuring temperature differences between different locations on one tire and for measuring temperature differences between different locations on another tire as called for in claim 31 of Applicants' Application.

Breed discloses a method and apparatus for monitoring tires by employing one or more temperature sensors 10 mounted onto the vehicle in a position so as to receive thermal radiation from a tire 12 (see Breed at column 11, lines 18-22). Breed is configured so as to measure the temperature of one tire and then compare this temperature with that of a mating tire of the vehicle to determine if one is hotter that the other to detect an undesirable condition (see Breed at column 11, lines 44-50). In an automobile, for instance, the mating tires would be the pair of tires at the front of the vehicle such that the temperature of the left front tire would be compared to the temperature of the right front tire (see Breed at column 11, lines 44-45). The apparatus of Breed switches between fields of view from one tire to the other mating tire to determine if a temperature difference between the two exists (see Breed at column 14, lines 5-9). In certain exemplary embodiments in Breed, one of the mated tires may be substituted with a heat generating element heated to a predetermined temperature that will equal the temperature of a normally operating tire (see Breed at column 15, lines 54-59).

Breed does not disclose the apparatus set fort in claim 31 of Applicants' Application that calls for sensors to be configured for measuring the temperature difference between different locations on one tire and for measuring the temperature difference between different locations on another tire of a vehicle. Breed, instead, discloses a method and apparatus for measuring the temperature of one tire and then comparing this temperature measurement with the temperature of another, mated tire. Alternatively, Breed discloses an embodiment in which the temperature of a tire is measured against the heat generating element that mimics the elements of a mated tire. Breed is not directed to and does not teach a method and apparatus in which the temperature difference between different locations on a tire is measured. Breed, instead, discloses and teaches measuring the temperature difference between different tires and provides no insight towards the measuring of different location on a single tire.

As such, Applicants respectfully submit that claim 31 defines over both Watkins and Breed and is in condition for allowance. Further, all claims that depend from claim 31 (claims 32-34) are also in condition for allowance as their rejections are made moot due to the allowance of claim 31.

As stated, claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Albuquerque. Respectfully, Albuquerque does not disclose or teach a method for monitoring a condition of a tire that includes the step of producing a first sensor output signal representative of the temperature at a first location on the outer surface of a tire. Support for this claim amendment may be found on at least page 8, lines 11-16 of Applicants' Application.

Albuquerque is directed towards a tire management system that includes placing multiple, fixed, strategic temperature sensors embedded into the tire tread or on the inside tire walls of all tires on a vehicle (see Albuquerque at paragraph 4). Albuquerque discloses embedding temperature sensors 4 in the tread 2 above a cord 3. Additionally, temperature sensors 5 are located on the inner side wall of the tire (see Albuquerque at Figs. 2 and 4 and paragraph 15). The temperature sensors in Albuquerque are therefore located inside of the tire itself or are located on the inner side wall of the tire so as to monitor temperatures at multiple fixed zones and temperatures close enough to the metallic radial cords embedded in the tire to determine their temperature (see Albuquerque at paragraph 1 and Figs. 1-3).

Claim 25 calls for a method that includes a step of producing a first sensor output signal representative of the temperature at a first location on the outer surface of a tire. This step is not disclosed in Albuquerque that instead discloses and teaches temperature measurements at multiple locations inside of the tire and on the inner surface of the tire. Further, it would not have been obvious for one having ordinary skill in the art to modify Albuquerque so that the temperature sensors in Albuquerque were configured for measuring the temperature at a location on the outer surface of a tire. Placing the temperature sensor on an outer surface of the tire, for example on the tread 2, would result in damage to the temperature sensor through contact of the temperature sensor with the road surface. Albuquerque is explicitly directed towards temperature sensors 4 located inside of the tire and on the inner surface of the tire. There is absolutely no disclosure or teaching in Albuquerque to motivate one having ordinary skill in the art to place the temperature sensors of Albuquerque on an outer surface of a tire.

As such, Applicants respectfully submit that claim 25 defines over Albuquerque and is in condition for allowance. Further, claim 26 that depends from claim 25 is also in condition for allowance due to its dependence from claim 25.

Applicants respectfully submit that all claims are allowable and that the application is in condition for allowance. Favorable action thereon is respectfully requested. The Examiner is encouraged to contact the undersigned should the Examiner have any questions concerning this Amendment or require any additional information.

Respectfully submitted,

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